A Research Agenda for Employment and Training Policy in the Eighties

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Daniel H. Saks

Many analysts regard "policy research" as a contradiction in terms. The only kind of research that many who make or influence decisions want to see are "findings" that confirm the wisdom of their past judgments and current policy positions. A substantial fraction of research supported by policymakers is exactly of this advocacy variety. My relatively brief experience in Washington did not, however, turn me into a complete cynic on this question. I have seen situations where good research has changed people's minds and even situations where a demonstrated public interest prevailed over a private gain. That sort of research is the focus of this agenda for policy research on employment and training programs.

Good policy research should result in good programs. And good employment and training programs have as a defining characteristic the increasing of potential earnings of participants above what they would otherwise have been. There may be other good or bad consequences of such programs. The ones I care about are increases in lifetime potential com-
Compensation from the labor market. Even where an employment and training program is designed to redistribute income within the economy, it is redistribution that takes the form of higher subsequent earnings for the participant. That is what makes it an employment and training program rather than an income transfer program.

This essay is divided into two parts. Part one develops my priorities for the Department of Labor's vastly diminished research budget. It argues that good data collection is the primary federal research role. None of the important policy questions can be resolved without good data, and the collection of such data is the unique responsibility of the federal authorities. At current budget levels, the first responsibility is to maintain existing longitudinal data sets. Then we must begin to collect adequate data on program participants and similar nonparticipants so we can determine whether programs are working and under what conditions. Even a bare bones research effort of this type would exhaust current budgets of the Office of Research and Evaluation of the Employment and Training Administration. I argue that the level of research expenditures should be closer to the levels of the Administration's original request for 1984 and to the levels that prevailed in the late 1970s.

The second part of this essay elaborates a more complete agenda for research and is directed to researchers and funders of all sorts. It follows what I take to be the natural set of questions to ask about an employment and training system. Finding the answers to these questions is the rationale for an employment and training research policy. The questions are:

1. *Who* should be the target of employment and training programs?
2. *What* are the best potential "treatments" or sequences of "treatments" for specific types of potential participants?

3. *How* should the employment and training system be organized and financed to best deliver the appropriate services to the appropriate participants?

Even though these three questions will be treated in separate subsections, it should be noted that there is potential interplay among the three types of questions. For example, if members of a particular group are in trouble in the labor market yet no employment and training program would help them, they should not be a target for such programs. Similarly, if members of a particular group will not participate in a program, they should not be a target for participation in that program. So these three questions define interrelated components in the design of an effective employment and training system.
I. Research Priorities for the Employment and Training Administration in the Eighties

With the end of the massive research and development efforts of the Youth Office, federal support for employment and training research is now almost totally concentrated in the Office of Research and Evaluation of the Employment and Training Administration. Table 1 shows the course of budget authority and outlays for that office by itself over the past seven years:

Table 1. Budget for Office of Research and Evaluation, Employment and Training Administration (in millions of dollars)

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Readers will note the substantial if erratic reduction in expenditures under the Reagan Administration, though had it not been for the parochial intervention of a Democratic committee chairman, budget authority in 1984 would have returned at the Administration’s request to the much higher nominal level of the late 1970s. I am sorry to note that the Administration’s budget requests for 1985 are only for current services. In the face of such cutbacks, what should the research priorities of the Employment and Training Administration be?

The most important research function of the federal government in this area is collecting what might be called “problem” data for analysis of why poor earnings are generated and how actual and potential programs might raise such earnings. Private individuals will not collect or
disseminate such data since the costs vastly exceed any potential private benefits. It also makes little sense for states to collect data that would be useful to all of them and might make some of them seem incompetent. Valid empirical research depends first on good data and the federal government must be the unit of government to collect it.

The most important type of data for the government to collect is longitudinal information on the same individuals through time. This type of data has two unique virtues. First, it allows us to observe and control for effects of differences among people that persist through time. And this sort of population heterogeneity is one of the main problems for employment and training policy. Who should participate in such programs and how can we sort out program effects from unobserved differences among people? Longitudinal data are extremely helpful for answering such questions. Second, such data can help us identify answers to the questions that have the greatest impact on federal budget policy: how do decisions about work, family, consumption, and other matters in one period affect results in some subsequent period. The essence of employment and training investments is trading lower earnings now for higher earnings later. How these investments occur and how they might be improved are the key research questions for us. But similar questions arise for Medicaid, Medicare, AFDC, Social Security, and the disability programs.

Readers will recognize that I am arguing for the National Longitudinal Surveys (NLS) as the single most important research function of the Employment and Training Administration. That item is where I would draw the wagons in a circle; of course, I hope it would not come to that. I am saying that it is the starting point.

This means that we should not let such longitudinal panels stop for transitory budget savings. The reason is simple. The
costs of reconstituting such a sample when reason finally prevails are enormous. Consider the resource costs alone. The new youth cohort of the NLS cost about $2.5 million to start up. The entire NLS with all of its cohorts will cost less than twice that to maintain. But the real cost of stopping a cohort is in having to wait for years to build up enough history on individuals to get answers to important questions. Can we really afford to wait a decade to reconstitute a panel with enough history to answer questions we need answered about who is in trouble in the labor market, why, and what the probable course of earnings of program participants might have been in the absence of program participation?

My desire to keep the NLS alive does not mean I believe it to be the most sensible way to meet federal longitudinal data responsibilities in this area for all time. Just because Labor Department personnel had the foresight to initiate the NLS, why should it continue to be a primary responsibility of the Employment and Training Administration? Other longitudinal panels have been collected by other agencies. It is time for a coordinated approach to such data and it is time for the design and acquisition of such data to be passed on to the independent data collection agencies where they belong. The resources and the responsibilities for the NLS should probably now be turned over the the Bureau of Labor Statistics where decisions about data needs and costs can be shared better both within and across agencies and where decisions about how to change the size and duration of particular cohorts could be made on statistical grounds and not on the vagaries of political interests in active labor market policies. So when I argue for not using the NLS as the bridge over a temporary budget crisis, I am not arguing for immunity—only for a jury trial by its peers and a restraining order to prevent irreparable damage.

I would, however, go much further than simply keeping NLS from dying. The major policy responsibility of the
Employment and Training Administration is to find out whether its programs are working and to identify which programs work best for which potential participants. Data are required that link subsequent labor market outcomes to specific "treatments" and sequences of "treatments" for the disadvantaged. And, of course, we need variation in "treatments" or controls in order to make some judgment about program effectiveness. The Continuous Longitudinal Manpower Survey (CLMS) was a complete failure at answering the most important policy questions about the programs. All we learned was that certain broad categories of program appeared to be more effective for women than men in the mid-1970s. The Labor Department's refusal to collect adequate process data must be rectified if we are to have any idea about how to improve the employment and training system and not just whether to keep it.

This need for good process and outcome data in sufficient detail to evaluate programs at least in major states is particularly acute under the current Job Training Partnership Act, since so much authority has passed to the states with so little federal monitoring of activities. In a couple of years, Congress will want to know whether the Job Training Partnership Act is nothing but a transfer of funds to the states. And the states will want to know what programs are effective for which groups in which circumstances. Process and outcomes must be better linked. The CLMS was only a poor start. The message is not to scuttle CLMS-type activities but rather to expand them and do them correctly. And next time, we should not have time and resources drained by the sort of unsatisfactory official analysis that accompanied release of each CLMS wave. If the lack of an official analysis makes some bureaucrats cringe, then it simply illumines more sharply the problem of trying to do nonadvocacy research in the current institutional setting and Congress might well consider how to make program evaluation more independent.
Program data collection should be linked to participant data and these should be linked to control group data such as the NLS or other federal longitudinal data surveys. Further, we need to collect data on the participation process itself so we can better learn how to adjust our results for selection bias (programs appearing to work or not work because the unobserved characteristics of the participants were systematically biased toward success or failure). Put simply, we need to understand how people get selected or select themselves for services. Not only is that question important in its own right, but it is essential to sorting out program impacts from selection impacts. This whole program data collection effort will cost at least as much as the NLS and would exhaust current ETA research budgets. Linkages with Social Security and other program administration data can give us more information for the dollar, but it will still be hard to collect much program evaluation data at required levels of detail and stay within current budget levels.

In order for this system to work well, other activities are required that could easily be done if we could return to the budget levels of the late seventies. First, the data need to be available in a highly subsidized, well-designed, on-line database system so that researchers with a microcomputer and a modem can easily use the data. The National Opinion Research Center and The Ohio State University are taking only the first steps toward such a system now. Second, an independent committee needs to be established by ETA to decide how to add special questions to the NLS and how to add regularly new entrants to the cohorts in the sample. The model should be the way access is arranged for the federal research facilities in the natural sciences. I reiterate this point below, but we need to close the loop in social science research between anomalous findings and the generation of new data to shed light on mysteries. And we also need new
entrants to the cohorts so we can sort out vintage changes from maturation effects within cohorts.

Finally, we need to provide small grants to researchers to help with the analysis. The model should be the dissertation grants program. Even senior researchers can occasionally be hired in return for summer money, research and clerical assistance, graduate student support and access to good data. And if the senior researchers need more, they are more likely to find funding elsewhere. The highest payoff is probably from using young academic researchers.

In this section, I have outlined what I would do with the level of research budgets observed in the late 1970s. I have not included any funds for evaluation of potential new programs (so-called demonstration or pilot projects) because my conclusion from our experience in the 1970s is that such research is costly relative to what we might learn. Of course, if states can be talked into planned variations that can be evaluated, the federal government could cheaply and effectively do some of that evaluation. But the program money would have to come out of programs and the federal government would have to be able to walk away from some of those demonstrations on the grounds that the program operators made serious evaluation impossible.

What follows are some more specific proposals for research at budget levels in excess of those in place at the end of the 1970s. They represent some of my wish list for foundations and agencies of all sorts. I reiterate, however, that almost none of them are feasible or even worthwhile unless the basic data base requirements are taken care of first.
II. Who, What, and How?

Who Should Be Helped?

Since the goal of employment and training programs is to improve unsatisfactory earnings, the first task is to identify the sources of low earnings. Understanding the generation of low earnings has two extremely important uses in the design of an employment and training system: first, it helps in identifying the appropriate target groups for such programs and, second, it plays an important role in the evaluation of programs by describing the probable course of earnings in the absence of any program intervention. Thus, good targeting and good evaluation both depend upon a good understanding of what economists call earnings functions. Of course, economists have estimated literally thousands of earnings functions over the past few decades. I would argue, however, that some new emphases are required.

Earnings functions have several components to them. First, the earnings themselves can be divided into hours of work and wages per hour. Programs may affect these components differently for different groups. Second, there are the characteristics of the earners associated with especially low earnings. These include the education, training, and work experience of the earner—all of which might be directly changed by an effective employment and training program. Other personal characteristics include the race, sex, and ethnic background of the earner. These might be associated with discrimination in the labor market and might suggest where compensatory and antidiscrimination policies could be helpful. Nonpersonal characteristics often associated with poor earnings include the industry and occupation of regular employment and the condition of the labor market in which the earner normally resides.
The third component of earnings functions includes the fixed but typically unmeasured characteristics of earners. Even though these characteristics are unmeasured, we know about them from the simple fact that earnings of apparently similar individuals differ in persistent ways. The final component of the earnings function is what might be called the shock or dislocation factor. People have good or bad years and sheer luck can propel them to a temporary or permanent change in their earnings. Even though these are random events, we can still learn about the typical size of such shocks and about the typical trajectory of earnings differentials associated with such shocks.

Economists have learned a great deal about the shape of earnings functions in the past decade. We know that training programs have a greater effect on the hours of work of participants than they do on the wages of successful participants. We know that education and experience account for something like a quarter of the variance in earnings. We know that other personal variables account for perhaps a fifth of the variance of earnings. And we know that other unmeasured fixed characteristics of earners account for perhaps another quarter of the variance of earnings. We also know that almost two-thirds of any shock to normal earnings fades away within one year. In short, we can label perhaps half the correlates of variance in earnings observed in the population. Whether one considers the glass to be half full or half empty is not entirely a matter of taste. Understanding the unobserved portions of the earnings function needs to become a high priority if we are to understand how to match programs to individuals. Progress requires cooperative research projects among social science disciplines.
I would identify the following important research issues on earnings functions for consideration:

1. Why should hours of work be more responsive to employment and training programs than the wages per hour? Do employers establish a set of minimum characteristics for potential employees at a given wage and only hire those who have those characteristics? Are there differences between employment and training interventions that affect hours and interventions that affect earnings? Are some types of potential participants more susceptible to hourly earnings gains and others to hours gains?

2. How can we develop less superficial measures of personal characteristics and of personal capacities? How, for instance, do we adjust years of schooling and types of experience on the job to reflect differences in quality of those experiences that might be systematic across certain members of the population? One particularly acute problem in the employment and training area is that we are interested in programs that affect long term earnings and yet we want to evaluate programs quickly. This means that we have to develop tests that can measure changes in earnings-related characteristics of individuals. These should help define the content of programs as well. There already exist several tests for certain types of vocational skills and these need to be developed further. Since the Army is currently engaged in fairly elaborate analysis of skills required for certain jobs, more collaboration between civilian and military employment and training interests might pay off. The crucial point is to develop measures of skills and other characteristics which are in turn related to subsequent earnings gains. Indeed, such tests would be validated by earnings gains.

3. We need to learn more about the nature of those fixed, unmeasured characteristics that account for at least a quarter of the variance in earnings in the population and are, I would
argue, the most crucial portion in understanding concentrated earnings problems. Econometric techniques can identify for study individuals with persistently low earnings given their other characteristics. The defect of current social science research is the alienation of analysis from data collection. Unlike the natural sciences where a peculiar finding results in the design of new tests and the acquisition of new data, in the social sciences that linkage is much less evident. Those individuals with large negative fixed characteristics need to receive in-depth analyses. Simple massaging of existing data sets is not going to resolve these questions about health, motivation, decisionmaking and other factors. Even Herbert Parnes, who has collected one of the most important data sets available to modern social scientists has noted this problem:

After examining a computer print-out of the relevant information for an individual, one generally longs for an opportunity to talk to her or him for an account of why things happened as they did and how this respondent reacted.

The loop must be closed to understand why some are special and what this implies about employment and training programs for them. This might involve both special interviews and also planned variation in providing employment and training strategies for such people. One way of identifying a problem is to see what helps remove it.

4. It is important to explore differences in the recovery of individuals from negative earnings shocks or dislocations. These are typically modeled as first order Markov processes; is this the best characterization? How do the fade-out rates (transition probabilities) vary with the characteristics of the individuals involved and their situations? Neither industry nor occupation are good predictors of how rapidly an earnings shock fades away, but general levels of unemployment in the local labor market are important. Why? One of the
difficulties facing programs for dislocated workers (workers with decent jobs who suddenly find themselves unemployed because of technological advance, competition, or reduced demand for their products) is determining who will likely be in long term trouble and who will recovery quickly. This was a special problem of the Trade Adjustment Assistance Act programs. It is a particular worry because provision of attractive programs for those who rebound quickly by themselves might delay their recovery and waste scarce resources. Learning how to target such programs means learning which individuals will have the slow fade-out rate for shocks. Again, it may mean in-depth analyses after they are identified.

5. How do low earners move among labor markets, firms, jobs within firms, and occupations? We have little understanding of the way in which unobserved characteristics affect both low earnings and mobility decisions. It may be that one of the better employment and training strategies for many involves incentives to workers and employers for mobility. What we seem to know from the literature on mobility is that there are movers and there are stayers. Why? Are these fixed, immutable characteristics? Can we find some way of distinguishing between these two categories before the fact as an aid in targeting various programs. Again, it requires statistical analysis to identify the stayers and clever probing to figure out why.

*What Should Be Done? Toward Better Program Design for Particular Groups*

If we have learned anything over the past two decades about employment and training programs, it is that different programs work better for different groups (and that some do not work at all). Discussion of research on program effectiveness should therefore be organized by particular groups among those most likely to be distressed workers. This is not
the place for a detailed argument about who is likely to be a distressed worker in the 1980s since I have only recently reviewed the evidence about that. I will simply discuss program research issues for the four key groups that might be in labor market distress: 1) youth having difficulty breaking into the labor market; 2) disadvantaged adults with low normal earnings; 3) dislocated experienced workers; and 4) distressed older workers.

Before turning to programs for those particular groups, I will consider macroeconomic policy because that affects all these groups. There is a division of labor in economic policy for dealing with the problems of distressed workers. There are the cyclically unemployed and underemployed and for them, by definition, the best program is a buoyant labor market. The other distressed workers are those who are, again by definition, structurally underemployed, unemployed, or poverty wage workers. The demarcation between these sets has been the subject of debates among economists for generations. The more recent form of the argument is over whether there is a level of overall unemployment below which the inflation rate begins to accelerate. Whether or not such a point exists, most agree that there are limits to how much overall macroeconomic stimulus can accomplish in eliminating unemployment and poverty level earnings. Because the limits on general demand stimulus are so important to employment and training policy, an agenda for research on macroeconomic issues belongs in the list of research issues discussed here. My entries are:

1. How should business cycle conditions affect the mix of services provided by the employment and training system? This is a broad question on which many have already taken a position. For example, I have argued that the current employment and training system with no public service employment and few support services might have made sense
in the more normal labor market of the late 1970s and the programs of that period might have made more sense now in dealing with the long term unemployed who have exhausted their unemployment benefits and for whom welfare is not a viable option. Part of my argument rests on the difficulty of enforcing a work test for the long term unemployed who might otherwise be helped by extended unemployment insurance benefits during such a severe recession. Offering help in the form of a job may assure fewer adverse incentives. But this is only a hypothesis worth examining. Are long term unemployed better off with a public job and is society better off transferring aid to them via such a mechanism? The supported work experiments examined the effectiveness of the well-designed sheltered workshop for the disadvantaged, but we have not adequately explored its value for the cyclically unemployed. Please note, I am not naive enough to think this would be a research priority of the current Administration. But it is a strategy that ought to be of interest, especially in the context of workfare proposals. The parallel question is whether it makes sense to spend much money on training when unemployment is this high? Will such workers at best simply displace other workers? The displacement question is just as important for training programs as it was for public service employment programs.

2. What sets the limits for the employment-expanding possibilities of overall economic policy and how do these limits vary? Demographic characteristics have been emphasized in past research, but to say that there are more youngsters and women in the labor force and that the unemployment rate is higher is simply to relabel our ignorance. We know that unemployment consists of short spells by many and long spells by a few. We must disentangle those two components in our analysis of the relation between labor market conditions and inflation. Short spells might actually increase as the labor market becomes tighter and there is more job mobility; but why is long term unemployment so
relatively unresponsive? What structural programs would increase the responsiveness of the long term unemployed to buoyant labor markets? An additional limit on use of macro policy to reduce labor market distress has been the inflationary impact of capacity utilization on product markets. As recently as 1973, labor and product markets appeared to tighten simultaneously. In the late 1970s, it appeared that produce market pressures on prices occurred well before labor market pressures. Why should such a disconnection occur?

3. How might government reduce inflationary labor market pressures without incurring such excessive costs among those who are at the margin of distress or poverty? We have known for some time that it takes an extra 1 percent unemployed for two years to lower the inflation rate by 1 percentage point. That relationship has held for some years and it gives an idea of how costly it is to fight inflation through the labor market, especially when poor workers suffer disproportionately from increases in unemployment. Are there ways of targeting deflationary pressures to increase their efficiency or are there ways of arranging real wage cuts in response to shocks like the OPEC oil price increases without incurring such heavy social costs? In our decentralized labor markets, the idea of income policies to coordinate such reductions is attractive and may yet be needed in the 1980s. Understanding how wage increases diffuse through the economy thus becomes important for understanding how to coordinate anti-inflation and employment and training strategies.

We turn now to a discussion of program research for each of the four distressed groups enumerated above. It should be noted that the Labor Department has supported so much research over the past two decades that many of the issues mentioned below have been touched upon in one project or another and so what follows is an agenda for continuing research as well as new research.
**Distressed Youth**

Although youth unemployment rates are high, most youth have relatively little trouble entering the labor market. However, a concentrated group of youth (somewhere between 5 and 10 percent) do have considerable difficulty. They suffer long term unemployment and this results in lower earnings later in their lives. Youth from poor families with poor education and, if black, the additional problems of discrimination face horrendous problems in the labor market. An enormous amount of extremely useful research was mounted in the 1970s. I would recommend the following topics for further consideration:

1. How should alternative schools be designed for high school dropouts and potential dropouts? The Youth Incentive Entitlement Pilot Projects showed that the offer of a job and an alternative school had little impact on dropping out of school, but it did cause many who had already dropped out to go into an alternative school program. There is much less indication of any impact on graduation rates, though perhaps some earnings impacts. In the new Administration’s unseemly haste to close down the previous Administration’s research efforts, many important questions were left unanswered. Was it the offer of a job or the offer of an alternative school or both that caused this return to a schooling program? What was the impact of that alternative schooling on the functional literacy of those who participated? These key questions should be the subject of a major research effort on youth. The objective should be to incorporate the elements of alternative schools as regular institutional features of the high school programs. There is, to be sure, a great danger in rigid design of special programs for potential high school dropouts. This restriction on student mobility, however, is likely to be more than outweighed by the dreadful consequences of simply ignoring such groups. Everyone is now talking about the design of excellent high schools, by which they mean better high schools for the better students. I
am talking here about excellent programs in the high schools for the lower tail of the achievement distribution.

2. What do the noncollege bound students need to learn in high school? There is often a presumption that simple vocational skills are the best subjects for such students. There seems to be ample evidence that the secondary vocational education system, while more costly than other forms of high school, does not generally provide long term earnings gains for its graduates. Clerical and industrial education programs do provide some short term earnings gains. What are the sets of vocational skills taught most usefully in a classroom setting and are there ways of increasing the effectiveness of such instruction? Can we identify general vocational skills that should be taught? Should we not also be teaching young people reasoning and problemsolving skills? Cognitive psychologists have been making considerable strides in understanding how to teach such skills to young people with relatively low IQs. Should such reasoning and functional literacy skills be taught more and should out-of-school youth also get such training? How can we encourage mixtures of formal classroom training with on-the-job training such as are found in the "dual system" of West Germany. While that system cannot easily be translated to the United States because of substantially different traditions and institutions, the cooperative education movement is, perhaps, a viable model on which to build better educational experiences for noncollege bound youth.

3. What do employers really want in their entry level workers? It is my impression that upper level officers of large companies say they want workers who are generally trained and can therefore learn the specific skills required at a firm. Lower-level supervisors, on the other hand, are reputed to want workers who already know the specific skills that are required. It would be useful to analyze what kinds of skills are required and where those skills are best taught. We cannot simply rely on the market to handle this problem
because the schools have generally done a poor job of trying to serve the poor students. Irrelevant instruction may explain why dropping out is so common for some groups and places.

4. Job Corps needs to be continually monitored. It is the most successful and unique of the American employment and training programs for the severely disadvantaged and, because its cost will always seem excessive to some, it is necessary continually to be able to make the case that the rate of return is high. It is also important to discover if that rate of return should start to fall. We should also explore how elements of the Job Corps program might be used in less expensive programs of a nonresidential character. In my view, Job Corps should be the centerpiece of the employment and training system and it should be recognized as a laboratory for design elements throughout the system.

Disadvantaged Adults

It has been the hope, particularly after the retargeting of programs in the early 1960s, that employment and training programs could raise the earnings of those workers whose normal earnings were below subsistence. It was an alternative to welfare. We now know from the negative income tax experiments that creating work incentives under welfare will be expensive because of the necessary adverse work incentives for those formerly above the break-even level. That means there is even more value to raising potential earnings of the poor through effective employment and training programs. Here are my candidates for research:

1. How can income transfer programs be better linked to employment and training programs? It is clear that a simple unified negative income tax is not desirable unless it is linked with the adoption of a simple flat-rate tax—and I do not consider that very feasible. Different groups should be subject to different tax rates and income guarantees depending on their family situation, employment prospects, etc. Employment and training programs can have a place in such
a design. For one thing, such programs can help select out those who do not need labor market help. That has not been a popular perspective in this country, though it appears to be implicit in the programs of Sweden and some other countries. I again mention the possibilities of sorting the long term unemployed according to labor market attachment by offering benefits (such as training or job subsidies) that can only be used in the labor market.

2. Why are job subsidies so ineffective despite the fact that economists find them so desirable? We have learned that employers do not respond much to employment incentives; there are reasons one can imagine, including red tape, worry about tax audits, certification by the government that those receiving vouchers are “turkeys,” etc. But we do not know the answer, nor do we know if there are effective ways of offsetting these defects. Job subsidies to be used in the public or private sector ought to be the best way of doing targeted job creation. We know it is not. Why? Can some experiments be devised to find out? While the Employment Opportunity Pilot Project was poorly designed, the question it was supposed to answer still remains.

3. Why did CETA and other programs seem to work better for women than for men? Is it that the women were of higher quality because of sex discrimination in the labor market or other reasons? Is their access to comparable opportunities less? What does the answer imply about improving the design of programs for women and for men? Are there any useful interventions for adult men?

4. What is the relationship between low normal earnings and physical and psychological health and what does the linkage imply about the design of programs? A recent paper by some Vanderbilt colleagues suggests that those with fewer than eight years of formal education are three times as likely as high school graduates to have common diseases including cardiovascular, pulmonary, and musculoskeletal. This
would be one important mechanism linking low earnings between periods in an individual's life. Low education is correlated with low earnings. Is it a cause or effect of poor health? Answering such questions requires new types of interdisciplinary research and an alliance between social and biological sciences that has not been the norm in the past.

5. Is there addictive behavior being generated by human resource programs as some conservatives suggest? Does government help breed dependency and are there some types of help that are more likely to breed the sort of independence that most of us want program participants to achieve? The question has not been taken seriously, but I believe it should be. In more formal terms, it is a question about how far back in the evolution of a person's career state dependency (in the Markovian sense) persists. Sociologists have pioneered methods for analyzing such problems using long panels of data and it is an important and tractable issue. How big is the effect and how can it be minimized?

6. Why is the serious bifurcation in the labor market for blacks occurring and what, if anything, can employment and training programs do about it? While earnings of young educated blacks has been rising to parity with similar young white cohorts, the relative earnings and income of less educated blacks has been falling so that average income differentials between the races have stayed remarkably constant. Many less educated blacks are simply dropping out of our statistics. Why? What are they doing? Are things getting worse or do they have better alternatives? Has the type of discrimination faced by blacks in the labor market become quality discrimination (blacks have to be better than whites to get similar jobs) or have education and training opportunities been getting worse for blacks at the low end of the distribution? Are new programs required and could some planned variation or experiments be devised to identify better programs? A major effort needs to be undertaken to find the equivalent of Job Corps for such disadvantaged adults.
Perhaps an intelligent program of prevention should be put in place and those who are too old should simply receive income transfers. That decision should not be made on the basis of current knowledge.

Dislocated Workers

Experienced workers with good jobs have been laid off in record numbers over the past four years and this has led to a revival of the automation scare of the 1960s. I would hardly deny that the economy has been undergoing change and that we are moving closer to the day when no larger a share of the workforce will be involved in manufacturing than is now involved in agriculture. However, I see no reason to panic about the pace of change. Some readers may respond, "Of course he sees no reason to panic, he is a tenured professor!" This is not the place for detailed argument, but many recent problems have been associated with the recession and many will be eliminated by the recovery. It is simply too early to tell whether, for example, the upper Midwest is in a serious long term decline or whether it is suffering from the fact that we have been using high interest rates to fight the inflation for the past four years. The upper Midwest specializes in the manufacture of interest-sensitive consumer durables. What seems pretty clear from the research of the past decades is that neither industry nor occupation is a good target for programs designed to help dislocated workers. The dislocation problems are most acute when individuals are not flexibly trained and when an entire labor market deteriorates. For dislocated workers, the following research topics should be considered:

1. Can the impact of the computer be predicted from analysis of the margins of change in the current economy? There is a tendency to focus on the job-displacing consequences of the computer, but of course many jobs will be created as well. Furthermore, the effects will be indirect. Predicting the consequences of the invention and adoption of the automobile by simply focusing on what happened to
horses and carriages now seems ridiculous to us. The automobile changed our entire economy and society. So the computer will allow the development of custom production where scale economies become less and less important. This means more people will be engaged in the design and matching of products to uses. What does all this imply about the retraining of workers and about the education of new entrants into the labor force? What general skills should high schools teach for labor market careers in excess of 50 years in such a new environment?

2. Under what circumstances are retraining programs effective for dislocated workers? Are retraining programs better for women than men because they have more restricted mobility in our society and retraining might compensate for immobility? How does mobility relate to the design of retraining? The early results from the Down River demonstrations indicate poor results for retraining programs, though experimental evidence would be more persuasive on the matter. What other programs need to be linked together for long term dislocated workers? For example, are there regional development efforts that can be facilitated by retraining, or is that a strategy for which troubled regions have no comparative advantage over growing regions like the Sun Belt?

3. Can incentives be designed and tested experimentally so that firms considering plant closings can help their employees find other jobs more quickly? Either tax advantages or the employment of plant managers as consultants in the placement process might be worth trying. Could incentives for early warning of at-risk workers be provided? There is now a high level of strategy involved in the negotiations with workers in such circumstances and the game may well be a prisoner's dilemma where some social intervention would make both parties better off.

4. Can labor market adjustment be aided by facilitating the flow of information on vacancies and job seekers? The
real estate industry has managed to keep the matching of buyers and sellers private while collectively sharing information through multiple listings. Could something along those lines be developed for the labor market? Anyone who has observed the job-matching by computer available in Sweden cannot fail to be impressed. Of course, Sweden is smaller and the public job service controls the market, but it is also true that they got the idea from experiments in Texas. This might be a service that could become self-financing after awhile.

5. For those workers who become long term unemployed, are there ways of giving assistance that will speed the labor market adjustment process? Experiments with alternative employment and training vouchers for training, job subsidies, relocation assistance, and other devices might identify mechanisms with fewer long term disincentives than those found under our typical readjustment assistance programs developed in the 1970s.

**Older Workers in Distress**

As workers age, they become increasingly attached to particular firms and dislocation results in longer duration unemployment. For many, health and related problems suggest that the best solution is retirement. But with increasing life expectancy, employment and training programs could have a 15 year pay-back period for a 55 year old worker. With an aging population and a need to raise the retirement age, this population will become an increasing focus of employment and training efforts. Society will increasingly face decisions about who should and who should not have to work. My candidates for research include:

1. What are the impediments to part-time employment for older workers and can something be done to reduce them? Fixed fringe benefits can make part-time employees quite unattractive. Can ways be found for the government to take over some of these and for employees to share more of the
costs and benefits of such schemes? Would that reduce transfer costs by increasing labor supply?

2. Will age discrimination statutes that are easiest to enforce on firings cause the locus of any age discrimination to shift to hiring? Is it generally becoming harder to get rid of bad employees and does that work to the detriment of hiring older workers? The answers to this might require some detailed analysis of employer behavior under different rules of seniority.

3. Can planned variation or experiments be devised to figure out the most effective employment and training interventions for older workers? Should special programs be designed for them or can such people be well-served in existing programs as some recent evidence suggests?

How Should the System be Organized?

It should be no surprise, but research seems to have had less impact on the design of the delivery system than on any other component of employment and training policy. Research on delivery system issues is the most potentially threatening activity from the viewpoint of the policymaker. Yet research might inform the ideological debates and there are some topics that I would consider prime candidates for research.

I cannot resist one remark about delivery systems and our experience over the past two decades. Since the early 1970s, the system has moved increasingly to a decentralized design with states receiving increasing authority. Only one part of the system was exempted from the perpetual commotion associated with reform of the system and that was Job Corps. It is federally operated by subcontractors who are held to standards that are generally well-regarded. And it is this part of the system that has had the most consistent success with the most difficult population: severely disadvantaged youth. Someone less familiar with the politics of employ-
ment and training programs might ask why Job Corps is not the model of an effective delivery system for helping distressed workers.

There are four research questions I would suggest:

1. What is the best mix of formal statistical evaluation techniques and of institutional control mechanisms to assure an effective system? A promising research strategy would involve collaboration of political scientists and economists on comparative studies across countries. Sweden and Germany are generally reputed to have high quality systems. They subject themselves to little formal evaluation and so there is little evidence on their systems' effectiveness. On the other hand, they have created institutional arrangements and government mechanisms that reinforce standards and relevance of training and they have established a highly professional system. We have generally failed to do that, though there are some examples of outstanding programs in particular places in the U.S. Both formal evaluation and good institutions are essential. We need research on how to design those institutions for the particular local environments in the U.S.

2. It is now understood that in the absence of controlled experiments, it is only by modeling the selection of program participants and the goals of program operators that we can identify the impact of programs. From my point of view, formalizing the selection would help in evaluation. In fact, if selection were done by an examination (and the ironic result is that the worse the test, the easier it is to be confident of the estimates of treatment effects) then we could improve evaluation of alternative programs. If we cannot do random assignments, then we ought to consider selection tests. But we also need to understand selection issues because they are important in their own right. The government is interested in these programs in order to offset market failure and to provide new employment opportunities to workers whom employers have not especially wanted. Employers, on the
other hand, want the best workers they can find. As we have shifted the balance of the system toward business control, the likelihood of creaming will increase. That may make the programs look better to the unsophisticated, but it will make the system less effective as a remedial device. That means that research on selection becomes one of the key points of inquiry about how the new JTPA system is working.

3. One of the ideological solutions to program deficiencies under the current administration is to convert competitive or monitored programs into general block grants to states. To my way of thinking, that will generate less efficiency. The competitive pressures and the oversight will be removed. Others argue, however, that local responsibility will more than offset such effects. This is a researchable question for the sort of methodology pioneered by Richard Nathan and it should be explored further.

4. Finally, we need to explore better linkages of finance and delivery, especially in conducting industrial policy. If we have to target aid to particular industries, I would argue that we should tax those same industries in the long run to pay for the benefits. Once that is done, I frankly do not care what the aid consists of. The rise and fall of the British Industrial Training Boards can provide a good deal of insight on this approach. The point is that we need to figure out how to link the financing of employment and training and other programs with the benefits and the costs. User fees might improve programs as well as relieve tight budgets. I have argued that user fees could be a great source of improvement for the Job Service and the principle ought to apply elsewhere.

Conclusion

While research budgets for employment and training, like the programs themselves, have been reduced substantially, there are certainly many issues that could profitably be studied. The first priority of the Labor Department ought to be data collection. In a more decentralized system, the ac-
quisition of data on outcomes, processes, and selection becomes essential if we are to know if the system is any good and if we are to improve the system.

Beyond that, I have listed a variety of research topics requiring closing the research loop to help in finding new answers rather than just in recertifying old problems. There is simply too much specialization in our research. Rigorous research across several activities and disciplines could have large payoff. But that requires coordination and leadership.

NOTES


5. Ibid.

6. Those who want to get an idea of the range of past research should see the report of the Committee on Department of Labor Manpower Research and Development, Assembly of Behavioral and Social Sciences, National Research Council, *Knowledge and Policy in Manpower: A Study of the Manpower Research and Development Program in the Department of Labor* (Washington, DC: National Academy of Sciences, 1975) p. 171.